

REMARKS

Applicant respectfully requests reconsideration of the instant application on the basis of newly amended Claim 1 and 3. Claims 1 and 3 are the main claims and the remaining claims are directly or indirectly dependent upon those.

The Examiner has rejected the claims as being unpatentable over U.S. Patent No. 6,311,001 by Rosine (*Rosine*) and in view of U.S. Patent No. 4,737,013 by Wilcox (*Wilcox*). It is believed that Claims 1 to 9 are clearly distinguishable over these two references for the reasons that will be set forth.

Claims 1 and 3 have been amended to include certain limitations that were previously found in now canceled claim 2.

Support for newly added dependent Claims 4-9 can be found in the application in paragraphs 0030-0031.

Objections to the Drawings

The Examiner objected to the drawings under 37 CFR § 1.83(a). Applicant respectfully submits that the informal drawings are sufficient to show every feature of the invention as claimed.

Attached hereto is a single page print-out from the Merriam-Webster Online Dictionary giving the definition for "single." As clearly used in the context of the present invention the term "single type" means uniform or consisting of or having only one part (definition 3a). Applicant suggests that the drawings, as previously submitted, depict a uniform type of cladding or a cladding having only one part.

Additionally, Figure 3a reaches a "cross section of a single micro-tubule having both the core and cladding glasses." (Paragraph 0020) A single type of cladding glass is shown.

Accordingly, Applicant respectfully submits that this objection should now be withdrawn.

Since the Applicant has taken exception to the drawing objection in the first paragraph of page 2 of the subject Office Action should be removed, Applicant can not yet submit "formal" drawings addressing the issues raised in the PTO Form 948 until after Applicant's drawing arguments have been considered. Therefore, in accordance with M.P.E.P. 608.02(b) (page 600-98, top of column 2), Applicant requests that the drawing correction be deferred until these arguments have been considered.

Claim Objection

The Examiner has objected to claim 2 on two bases.

Applicant authored the electronic submission using PASAT in accordance with the directions of the EPS PASAT manual. Please note that on page 36 of the PASAT manual available at the USPTO web site there is an informational comment that: "When the specification is viewed as an XML instance, the references are rendered as hyperlinks."

Thus Applicants respectfully suggest that the present specification is in accordance with current electronic filing requirements for PASAT authored specification and requests that the Examiner withdraws the first objection to the claim 2.

Regarding the objection as to claim 2 and the lack of antecedent basis, Applicant has cancelled claim 2

35 U.S.C. § 102(b) Grounds for Rejection

The Examiner has principally rejected the claims as being anticipated by *Rosine*. It is believed that Claims 1 to 9 are clearly distinguishable over this *Rosine* reference for the reasons that will be set forth.

The *Rosine* patent teaches etching a microchannel plate perform firm with “a conventional **alkaline** leach process.” [emphasis added] (Col. 3, line 45-47) The perform is then processed “in a conventional acid decore process.” (Col. 3, line 47-48)

The *Wilcox* patent discloses using three types of glass in the formation of a microchannel plate: a core glass and at least two types of cladding glass. (Abstract and Col. 6, lines 18-40) Additionally, *Willcox* describes the first step as an etching bath with HCL to etch out the core, followed by Hydrofluoric acid to etch away clad #1 and form tapered edges at the channel opening. (Col. 6, lines 48-68)

Currently amended Independent Claim 1 recites the following elements, the most pertinent to this discussion being presented in bold type for the convenience of the Examiner:

1. A microchannel plate for receiving photoelectrons comprising:
 - a plate-like substrate web formed from a plurality of microtubules of a single type of cladding glass and defining a pair of opposite faces;
 - the substrate web including a plurality of microchannel passages extending between the opposite faces and having openings in both of the opposite faces;
 - the microchannel openings having a funnel-like opening formed in the substrate web at least one of the opposite faces; and
 - the microchannel plate is formed from a microchannel plate preform including a core glass different from the cladding glass

and the cladding glass; the microchannel plate preform is first etched for a desired period of time with a first acid selected to create the funnel-like openings at the intersection of the core and cladding glass at least one of the opposite faces; the microchannel preform having been first etched is then subjected to a second etching process with a second selected acid to remove the remaining core glass forming the plate-like substrate web.

Since such first etching step of a single type of cladding glass using a first acid of the Applicant's invention as claimed is not disclosed or suggested by *Rosine*, Applicant suggests that the claimed structure of the present invention is neither identical to or disclosed by either of the *Rosine* or *Wilcox* devices. Therefore, *Rosine* cannot anticipate the present claimed invention.

35 U.S.C. § 103 Grounds for Rejection

The Examiner rejected Claims 3 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,737,013 by Wilcox (*Wilcox*). Applicant respectfully traverses these rejections for the reasons discussed below.

As discussed above *Wilcox* teaches using "at least two types of cladding glass and a core glass." Thus, one of ordinary skill in the art would not have been motivated to substitute two types of cladding glass with a single type of cladding glass, since *Wilcox* was teaching away from the acknowledged prior art at the time. See Col. 5, line 64 and following. In fact, *Wilcox* makes it clear (Col. 5, lines 65-67) that the benefits disclosed were "through the utilization of a second, control or super cladding."

By the present disclosed structure Applicant is able to achieve the advantages which have hitherto not been able to be achieved through any adaption of the prior art. It is therefore

believed to be clear that the particular structure of Applicant is extremely important and is not a mere matter of design.

It is improper to use hindsight having read the Applicant's disclosure to "pick and choose" among isolated prior art references to disparage the claimed invention. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Even where an invention is, as a whole, fully disclosed by a combination of prior art elements, such elements cannot be combined to defeat a patent as obvious unless the art teaches or suggests the desirability of making the combination. ASC Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). Thus, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, U.S.P.Q.2d 1780 (Fed. Cir. 1992). Finally, it is the invention as a whole that is important. Focusing on the obviousness of substitutions and differences, instead of on the invention as a whole, is a legally improper way to simplify the often difficult determination of obviousness. Gillette Co. v. S. C Johnson & Son, Inc., 919 F. 2d 720, 16 U.S.P.Q. 1923 (Fed. Cir. 1990).

Applicant respectfully submits that the combination of *Wilcox* with *Rosine* does not disclose, teach, or suggest the use of a single type of cladding and a fist acid bath using a selected acid as recited by amended Claims 1 and 3.

Dependent Claims 4-9 that depend from independent Claims 1 or 3 are also not made obvious by *Rosine* in view of *Wilcox* because they include the limitations of Claims 1 or 3 and add additional elements that further distinguish the art. Therefore, Applicant respectfully requests that Claims 4-9 be allowed.

New Claim

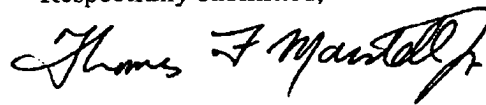
New Claim 4 through 9 are added to more fully claim the present invention. Claims 4-6 depends from Claim 1, and Claims 7-9 depends from Claim 3. Accordingly, Applicant respectfully submits that Claims 4-9 are patentable because they include all the limitations of Claims 1 or 3 and add additional elements that further distinguish the art.

Conclusion

Applicant has now made an earnest attempt to place this case in condition for allowance. In light of the amendments and remarks set forth above, Applicant respectfully requests reconsideration and allowance of Claims 1-9.

If there are matters which can be discussed by telephone to further the prosecution of this Application, Applicant invites the Examiner to call the attorney at the number listed below at the Examiner's convenience.

Respectfully submitted,



Thomas F. Marsteller, Jr.
Registration No. 29,672

Marsteller & Associates, P.C.
PO Box 803302
Dallas, TX 75380-3302
(972) 233-0939
(972) 386-3907 (Fax)

Date: February 3, 2004

ATTACHMENT A

**LISTING OF CLAIMS WITH MARKINGS
TO SHOW CHANGES MADE**

Attachment A
Listing with Markings
9

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (currently amended) A microchannel plate for receiving photoelectrons comprising:

a plate-like substrate web formed from a plurality of microtubules of a single type of cladding glass and defining a pair of opposite faces;

the substrate web including a plurality of microchannel passages extending between the opposite faces and having openings in both of the opposite faces; ~~and~~

the microchannel openings having a funnel-like opening formed in the substrate web at least one of the opposite faces; ~~and~~

the microchannel plate is formed from a microchannel plate preform including a core glass different from the cladding glass and the cladding glass; the microchannel plate preform is first etched for a desired period of time with a first acid selected to create the funnel-like openings at the intersection of the core and cladding glass at least one of the opposite faces; the microchannel preform having been first etched is then subjected to a second etching process with a second selected acid to remove the remaining core glass forming the plate-like substrate web.

2. (canceled)

3. (currently amended) A method for manufacturing a microchannel plate including the steps of:

etching a microchannel plate preform having two opposite faces including a core glass and a ~~first~~ single type of cladding glass different from the glass with a first acid selected for a desired period of time to create funnel-like openings at the intersection of the core and ~~first~~ cladding glass at one or both of the opposite faces;

subjecting the microchannel preform having been first etched to a second etching process with a second selected acid to remove the remaining core glass forming the plate-like substrate web.

4. (new) The invention of claim 1 wherein the first acid is hydrofluoric acid.
5. (new) The invention of claim 1 wherein the second acid is sodium hydroxide.
6. (new) The invention of claim 1 wherein the second acid is hydrochloric acid.
7. (new) The method of claim 3 wherein the first acid is hydrofluoric acid.
8. (new) The method of claim 3 wherein the second acid is sodium hydroxide.
9. (new) The method of claim 3 wherein the second acid is hydrochloric acid.



HOME

PREMIUM SERVICES

M-WCollegiate.com
M-WUnabridged.com
Britannica.com
Multi-User Licenses

DOWNLOADS

WORD OF THE DAY

WORD GAMES

WORD FOR THE WISE

ONLINE STORE

HELP

Merriam-Webster Inc.
Company information

Merriam-Webster Online Dictionary

Thesaurus

26 entries found for **single**. The first 10 are listed below.
To select an entry, click on it. For more results, [click here](#).

single[1,adjective]
single[2,verb]
single[3,noun]
single-action
single-blind
single bond

Main Entry: **ˈsin·gle** 4

Pronunciation: 'si [ng] -g&l

Function: *adjective*

Etymology: Middle English, from Middle French, from Latin *singulus* one only; akin to Latin *sem-* one -- more at **SAME**

1 a : not married **b** : of or relating to celibacy

2 : unaccompanied by others : **LONE**, **SOLE** <the *single* survivor of the disaster>

3 a (1) : consisting of or having only one part, feature, or portion <*single* consonants> (2) : consisting of one as opposed to or in contrast with many : **UNIFORM** <a *single* standard for men and women> (3) : consisting of only one in number <holds to a *single* ideal> **b** : having but one whorl of petals or ray flowers <a *single* rose>

4 a : consisting of a separate unique whole : **INDIVIDUAL** <every *single* citizen> **b** : of, relating to, or involving only one person

5 a : **FRANK**, **HONEST** <a *single* devotion> **b** : exclusively attentive <an eye *single* to the truth>

6 : **UNBROKEN**, **UNDIVIDED**

7 : having no equal or like : **SINGULAR**

8 : designed for the use of one person only <a *single* room> <*single* bed>

Get the **Top 10 Search Results** for "**single**"

For **More Information** on "**single**" go to [Britannica.com](#)

Pronunciation Symbols

Merriam-Webster

☒ Dictionary

☐ Thesaurus



single

Palm & Pock

Browse and download
Merriam-Webster
e-books and game
Palm and Pocket P
and Mobile Phones
[Merriam-Webster
Online Store](#)

Handheld
Collegiate

Now you can take
Eleventh Edition w
anywhere as Frank
new Speaking Elec
Handheld!
[Franklin.com/](#)

Merriam-Webster
Collegiate
14-day Free

Products

Premium Services

Company Info

Contact Us

Advertising Info

Privacy Policy

<http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=single>

2/3/2004